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Docket No. G-045US02PCT
Serial No. 09/744,527In the ClaimsClaims 1-81 (Canceled).

82. (New) A composition comprising a carrier and an isolated recombinant polypeptide consisting of a contiguous span of 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, or 100 amino acids selected from SEQ ID NO:4, wherein:

said isolated recombinant polypeptide has geranylgeranyl pyrophosphate synthetase (GGPPS) activity or wherein said isolated recombinant polypeptide specifically binds to antibodies that bind to: a) hGGPPS; b) a fragment of the hGGPPS protein; or c) a contiguous span of at least 6 amino acids of the polypeptide of SEQ ID NO:4.

83. (New) The composition according to claim 82, wherein said contiguous span includes at least one amino acid selected from the group consisting of:

- a. a Phe residue at position 204 of SEQ ID NO:4;
- b. a Phe residue at position 295 of SEQ ID NO:4;
- c. a Cys residue at position 205 of SEQ ID NO:4; and
- d. a Pro residue at position 225 of SEQ ID NO:4.

84. (New) The composition according to claim 83, wherein said contiguous span consists of 6 amino acids.

85. (New) The composition according to claim 83, wherein said contiguous span consists of 10 amino acids.

86. (New) The composition according to claim 83, wherein said contiguous span consists of 15 amino acids.

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87. (New) The composition according to claim 83, wherein said contiguous span consists of 20 amino acids.

88. (New) The composition according to claim 83, wherein said contiguous span consists of 25 amino acids.

89. (New) The composition according to claim 83, wherein said contiguous span consists of 30 amino acids.

90. (New) The composition according to claim 83, wherein said contiguous span consists of 35 amino acids.

91. (New) The composition according to claim 83, wherein said contiguous span consists of 40 amino acids.

92. (New) The composition according to claim 83, wherein said contiguous span consists of 45 amino acids.

93. (New) The composition according to claim 83, wherein said contiguous span consists of 50 amino acids.

94. (New) The composition according to claim 83, wherein said contiguous span consists of 55 amino acids.

95. (New) The composition according to claim 83, wherein said contiguous span consists of 100 amino acids.

96. (New) The composition according to claim 83, wherein the contiguous span consists of amino acid positions 200 through 300 of SEQ ID NO:4.

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97. (New) The composition according to claim 82, wherein said contiguous span consists of 6 amino acids.

98. (New) The composition according to claim 82, wherein said contiguous span consists of 10 amino acids.

99. (New) The composition according to claim 82, wherein said contiguous span consists of 15 amino acids.

100. (New) The composition according to claim 82, wherein said contiguous span consists of 20 amino acids.

101. (New) The composition according to claim 82, wherein said contiguous span consists of 25 amino acids.

102. (New) The composition according to claim 82, wherein said contiguous span consists of 30 amino acids.

103. (New) The composition according to claim 82, wherein said contiguous span consists of 35 amino acids.

104. (New) The composition according to claim 82, wherein said contiguous span consists of 40 amino acids.

105. (New) The composition according to claim 82, wherein said contiguous span consists of 45 amino acids.

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106. (New) The composition according to claim 82, wherein said contiguous span consists of 50 amino acids.

107. (New) The composition according to claim 82, wherein said contiguous span consists of 55 amino acids.

108. (New) The composition according to claim 82, wherein said contiguous span consists of 100 amino acids.

109. (New) The composition according to claim 82, wherein the contiguous span consists of amino acid positions 200 through 300 of SEQ ID NO:4.

110. (New) A composition comprising a carrier and an isolated recombinant polypeptide consisting of a contiguous span of 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, or 100 amino acids selected from SEQ ID NO:4 fused to a heterologous polypeptide sequence wherein:

said isolated recombinant polypeptide has geranylgeranyl pyrophosphate synthetase (GGPPS) activity or wherein said isolated recombinant polypeptide specifically binds to antibodies that bind to: a) hGGPPS; b) a fragment of the hGGPPS protein; or c) a contiguous span of at least 6 amino acids of the polypeptide of SEQ ID NO:4.

111. (New) The composition according to claim 110, wherein said heterologous polypeptide sequences comprises a leader sequence, a secretory sequence, a preprotein sequence, a nickel binding polypeptide sequence, a β -globulin sequence or an amino acid sequence employed for the purification of polypeptides fused to said contiguous span of amino acids

112. (New) The composition according to claim 110, wherein said contiguous span consists of 6 amino acids.

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113. (New) The composition according to claim 110, wherein said contiguous span consists of 10 amino acids.

114. (New) The composition according to claim 110, wherein said contiguous span consists of 15 amino acids.

115. (New) The composition according to claim 110, wherein said contiguous span consists of 20 amino acids.

116. (New) The composition according to claim 110, wherein said contiguous span consists of 25 amino acids.

117. (New) The composition according to claim 110, wherein said contiguous span consists of 30 amino acids.

118. (New) The composition according to claim 110, wherein said contiguous span consists of 35 amino acids.

119. (New) The composition according to claim 110, wherein said contiguous span consists of 40 amino acids.

120. (New) The composition according to claim 110, wherein said contiguous span consists of 45 amino acids.

121. (New) The composition according to claim 110, wherein said contiguous span consists of 50 amino acids.

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122. (New) The composition according to claim 110, wherein said contiguous span consists of 55 amino acids.

123. (New) The composition according to claim 110, wherein said contiguous span consists of 100 amino acids.

124. (New) A method of making a recombinant human geranylgeranyl pyrophosphate synthetase (hGGPPS) polypeptide comprising:

- a) transforming a host cell with a polynucleotide encoding a recombinant polypeptide consisting of a contiguous span of 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, or 100 amino acids selected from SEQ ID NO:4; and
- b) culturing said transformed host cell under conditions conducive to the expression of the polypeptide encoded by said polynucleotide.

125. (New) The method according to claim 124, further comprising the recovery of said polypeptide from the cultured host cell.

126. (New) A method of making a recombinant human geranylgeranyl pyrophosphate synthetase (hGGPPS) polypeptide comprising:

- a) transforming a host cell with a polynucleotide encoding a recombinant polypeptide consisting of a contiguous span of 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, or 100 amino acids selected from SEQ ID NO:4 fused to a heterologous polypeptide sequence; and
- b) culturing said transformed host cell under conditions conducive to the expression of the polypeptide encoded by said polynucleotide.

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127. (New) The method according to claim 126, further comprising the recovery of said polypeptide from the cultured host cell.

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